

# Changes in Multiple Sexual Partnerships, HIV Testing, and Condom Use among US Heterosexuals 18 to 49 Years of Age, 1990 and 1992

## ABSTRACT

We compared data from two independent, representative samples of the US population to determine whether heterosexual adults 18 to 49 years of age modified their human immunodeficiency virus (HIV) risk behaviors between 1990/91 and 1992. We found little change in multiple sexual partnerships, having a risky sexual partner, and HIV test seeking in the heterosexual population. Overall, consistent condom use significantly increased from 11% in 1990/91 to 20% in 1992, but this increase was limited to selected demographic groups. These results suggest a continuing need for HIV education among heterosexual adults. (*Am J Public Health*. 1996;86:554-556)

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## Introduction

Heterosexual transmission accounts for 71% of all human immunodeficiency virus (HIV) infections worldwide.<sup>1</sup> However, it remains less of a problem in the United States, where only 7% of acquired immunodeficiency syndrome (AIDS) cases are attributable to heterosexual contact.<sup>2</sup> Because the AIDS prevalence is low among US heterosexuals, some advocate targeting HIV prevention for certain risk groups and geographic locations<sup>3</sup> rather than targeting everyone.<sup>4</sup> Arguments for targeting based on AIDS prevalence are problematic because the incubation period from HIV infection to the development of AIDS is approximately 10 years.<sup>5</sup> To help resolve the targeting controversy, more information is needed on heterosexual risk behaviors. Although a few population-based surveys assessed changes in HIV risk among heterosexuals,<sup>6-9</sup> the generalizability of their findings is limited due to sample restrictions on sex<sup>6,7</sup> and marital status<sup>8</sup> and the reporting bias inherent in longitudinal studies (e.g., sample attrition, repeated measurement).<sup>6-9</sup> To assess changes in risk, we compared data from two national probability samples of US adults: the National AIDS Behavioral Survey and the National AIDS Behavioral Methodology Survey. We examined changes in HIV risk behaviors among heterosexual adults aged 18 to 49 years over approximately 2 years.

## Methods

Between July 1990 and February 1991, the National AIDS Behavioral Survey conducted telephone interviews with a nationally representative sample of 2673 adults aged 18 to 75 years to examine their HIV-related risk behaviors (response rate = 70%). Using similar sampling procedures in June through December 1992, the National AIDS Behavioral Methodology Survey interviewed 2030

adults aged 18 to 49 years by telephone to address methodological issues in AIDS behavioral research (response rate = 63.4%). Both the National AIDS Behavioral Survey and the National AIDS Behavioral Methodology Survey obtained adult respondents through probability sampling using random-digit dialing of the contiguous United States. Weights were applied to adjust for unequal probabilities of selection and nonresponse. Post-stratification adjustments were based on the 1989 Current Population Survey for the National AIDS Behavioral Survey and the 1992 Current Population Survey for the National AIDS Behavioral Methodology Survey. Further details on weighting and data collection procedures used in these surveys are described elsewhere (K. Choi, D. Binson, M. Adelson, and J.A. Catania, The prevalence and sexual health consequences of sexual harassment and involuntary sex among US adults 18-49 years, under review, 1995).<sup>10</sup> All measures except condom use in the two surveys (see footnotes to Tables 1 and 2 for definitions) were identical. We only included heterosexuals in the analyses. SESUDAAN procedures that take into account the complex survey design were used to compute adjusted standard errors for all analyses. Z tests were performed to determine statistically significant differences in proportions between 1990/91 and 1992. All percentages and sample sizes were based on weighted data.

## Results

The sample characteristics of the two studies were almost identical (National

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AIDS Behavioral Survey/National AIDS Behavioral Methodology Survey: 49%/49% male; 75%/78% White; 40%/37% 18 to 29 years old; 57%/52% college educated; 59%/57% married; 99%/98% heterosexual). Table 1 shows changes in having multiple sexual partnerships and having a risky sexual partner between 1990/91 and 1992. Table 2 (on the next page) reports changes in HIV testing and consistent condom use among respondents with HIV risk factors (i.e., having multiple sexual partners or a risky partner in the past year) during the same period.

## Discussion

Two national cross-sectional surveys, conducted in 1990/91 and 1992, indicate that the overall HIV risk levels of US heterosexuals 18 to 49 years of age remained unchanged over time. We observed similar proportions of individuals who reported having multiple sexual partners and a risky partner in 1990/91 and 1992. We also found no changes in the number of people tested for HIV in this 2-year period.

Between 1990/91 and 1992, consistent condom use among 18- to 49-year-old heterosexuals with HIV risk factors significantly increased from 11% to 20%. This finding corroborates other studies. The findings from the 1988 and 1990 National Surveys of Family Growth as well as the 1990/91 and 1992 National AIDS Behavioral Surveys suggest an increasing trend in consistent condom use among women 15 to 44 years of age (from 9% to 11%)<sup>7</sup> and heterosexuals 18 to 49 years of age (from 11% to 21%).<sup>9</sup> Other supporting evidence comes from Towne-Oller and Associates of New York City, which has tracked the national sales of condoms since 1990.<sup>9</sup> According to Towne-Oller's database, the number of condoms sold nationwide rose by 2.3%, from 236.1 million in 1990 to 241.5 million in 1992.

Although consistent condom use rose overall among heterosexual adults with HIV risk factors, this rise did not occur in all groups. We found that women, Whites, people in their 20s and 40s, the college educated, and those who were ever married made little change in their condom use. This finding suggests the need for broad condom promotion efforts. However, the current national radio and television campaign targets only 18- to 25-year-olds.<sup>12</sup> This campaign was launched by the Clinton Administration in 1994 and was the first condom

**TABLE 1—Percentages of Heterosexuals (18–49 Years Old) Reporting Multiple Sexual Partnerships<sup>a</sup> and Having a Risky Sexual Partner,<sup>b</sup> by Sociodemographic Characteristics**

	% (No.) Having Multiple Sexual Partnerships		% (No.) Having a Risky Sexual Partner	
	1990/91 NABS	1992 NABMS	1990/91 NABS	1992 NABMS
Overall	11 (1513)	11 (1979)	3 (1516)	4 (1985)
Sex				
Male	15 (744)	16 (975)	3 (744)	4 (975)
Female	8 (770)	5 (1004)	3 (772)	3 (1010)
Race				
White	10 (1137)	9 (1550)	3 (1139)	2 (1555)
Black	18 (191)	22 (234)	6 (191)	11 (235)
Hispanic	15 (127)	9 (131)	6 (127)	5 (131)
Other	13 (59)	13 (63)	2 (59)	5 (63)
Age, y				
18–29	17 (609)	18 (724)	4 (609)	5 (724)
30–39	9 (527)	8 (706)	4 (527)	4 (708)
40–49	5 (377)	5 (547)	2 (379)	1 (551)
Education				
Less than high school	15 (196)	17 (264)	3 (197)	10 (264)*
High school graduate	11 (453)	10 (702)	4 (454)	3 (703)
Some college	11 (865)	10 (1011)	3 (865)	3 (1016)
Marital status				
Married	3 (901)	2 (1136)	1 (902)	< 1 (1137)
Cohabiting	13 (69)	12 (142)	9 (69)	4 (144)
Separated/divorced/widowed	28 (158)	23 (203)	10 (160)	8 (204)
Never married	26 (384)	26 (496)	6 (384)	9 (499)

Note. The National AIDS Behavioral Survey (NABS) and the National AIDS Behavioral Methodology Survey (NABMS) used different time frames to assess whether respondents had sex with women only, men only, or both (i.e., the past 5 years and the past year, respectively). NABS, thus, defined heterosexuals as those who had opposite-gender sex in the past 5 years, and NABMS defined heterosexuals as those who had opposite-gender sex in the past year (sexual orientation for sexually inactive respondents was imputed with procedures described in Dolcini et al. 1993<sup>11</sup>). NABS = National AIDS Behavioral Survey; NABMS = National AIDS Behavioral Methodology Survey.

<sup>a</sup>Multiple sexual partnerships were defined as having two or more partners in the past year.

<sup>b</sup>Having a risky sexual partner was defined as having a main sexual partner who had multiple sexual partners in the past year or was HIV positive.

\*Z tests were significant at  $P < .001$ .

advertising ever financed by the federal government.<sup>13</sup>

People with less than a high school education appear to protect themselves against HIV infection by increasing condom use rather than by reducing the number of sexual partners. We found a substantial increase in the proportion of people with a risky sexual partner in this social group from 3% in 1990/91 to 10% in 1992. At the same time, we observed a significant increase in their consistent use of condoms over this 2-year period (from 1% to 18%). Reasons for this discrepancy in HIV-preventive behavior are unclear. However, the increased condom use in this risk group suggests that some are adopting safer-sex messages as part of their prevention strategies.

Caution is required in interpreting the findings of this study. Our 63% to 70% response rate is comparable to those achieved by other AIDS surveys conducted by telephone and face to face (i.e., 61% to 70%).<sup>14–18</sup> However, differences in response bias in our two surveys might explain the results observed in this study. Another source of potential bias may be self-presentation and recall problems inherent in self-reports. However, because such bias may have occurred in both surveys, it is less likely to affect the changes observed between 1990/91 and 1992. Observations made over a short period of time (i.e., 2 years) may not reflect temporal trends that are occurring among heterosexual adults. Research is needed to monitor patterns of risk behaviors in this population. □

**TABLE 2—Percentages of Heterosexuals (18–49 Years Old) with HIV Risk Factors<sup>a</sup> Reporting HIV Test Seeking<sup>b</sup> and Consistent Condom Use,<sup>c</sup> by Sociodemographic Characteristics**

	% (No.) Reporting HIV Test Seeking		% (No.) Reporting Consistent Condom Use	
	1990/91 NABS	1992 NABMS	1990/91 NABS	1992 NABMS
Overall	34 (244)	35 (408)	11 (220)	20 (272)**
Sex				
Male	34 (150)	39 (243)	12 (140)	24 (190)**
Female	32 (94)	30 (165)	8 (85)	11 (82)
Race				
White	30 (160)	36 (262)	11 (151)	18 (175)
Black	32 (47)	36 (87)	7 (38)	21 (70)**
Hispanic	60 (26)	38 (36)	2 (25)	34 (18)**
Other	34 (10)	23 (23)	53 (10)	18 (9)
Age, y				
18–29	35 (139)	32 (250)	16 (131)	24 (164)
30–39	30 (69)	44 (92)*	3 (61)	16 (74)**
40–49	32 (36)	33 (65)	6 (32)	12 (34)
Education				
Less than high school	20 (40)	26 (77)	1 (38)	18 (61)**
High school graduate	43 (68)	36 (133)	12 (61)	27 (82)**
Some college	33 (136)	39 (198)	13 (124)	17 (129)
Marital status				
Married	41 (45)	62 (26)*	6 (44)	11 (23)
Cohabiting	64 (15)	62 (25)	0 (15)	4 (22)
Separated/divorced/widowed	32 (60)	43 (72)*	9 (56)	10 (57)
Never married	28 (124)	28 (284)	16 (109)	27 (169)**

Note. NABS = National AIDS Behavioral Survey; NABMS = National AIDS Behavioral Methodology Survey.

<sup>a</sup>HIV risk factors were defined as having multiple sexual partners or a risky partner in the past year.

<sup>b</sup>HIV test seeking was defined as ever having been tested for HIV.

<sup>c</sup>The two surveys used slightly different questions to assess condom use. In NABS, respondents were asked two questions: "In the last 6 months, how many times have you had vaginal intercourse?" and "In the last 6 months, how many times have you used a condom during vaginal intercourse?" In NABMS, respondents were asked only one question: "Thinking about all the times you had vaginal intercourse during the past 6 months, would you say you used a condom never, less than half of the time, more than half of the time but not always, or all the time?" For analysis purposes, the condom measure in NABS was obtained by dividing frequency of condom use by frequency of vaginal intercourse (range = 0–100%) and then coding this calculated proportion as two categories: consistent use (100% use) and inconsistent use (0–99% use). In NABMS, consistent use was defined as using condoms "all the time" and inconsistent use as "never" using condoms, using them "less than half of the time," or using them "more than half of the time but not always." The comparability of these two measures was examined with data obtained in NABS Wave II, which asked all three questions listed above. We found that, of 125 subjects who responded to the three questions, only one gave inconsistent answers to the questions. (J. A. Catania, The National AIDS Behavioral Survey Wave II, unpublished data, 1995).

\*Z test was significant at  $P < .1$ .

\*\*Z test was significant at  $P < .05$ .

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